October 9, 1951.

Mr. John S. Loutit,
Bacteriology Department
University of Adelaide,
So. Australia.

Dear Mr. Loutit:

Indeed I had not forgotten your previous communication, and wondered how you were making out. I am glad to hear that your problem is finally materializing.

If you are not planning a similar experiment yourself, I wonder whether you would be kind enough to send one or two of your double mutants together with the wild type. I should like to test them for recombination, either within the strain, or with some mutants I had gotten from Pseudomonas fluorescens. In turn, I will be glad to send you the latter, if they should be of any use to your experiments.

Your low frequency of auxotrophs, even after application of penicillin, must have been most discouraging, and I cannot but admire your persistence. In addition, I must wonder whether a further improvement in some aspects of your technique is not possible.

Meanwhile, we found another approach to looking for auxotrophs that proved quite helpful with P. fluorescens, especially in combination with the penicillin method. The technique, called "replica-plating" consists of copying a pattern of colonies on one plate (complete medium) to one or more others (minimal medium). The agar surface is pressed gently on a disc of sterile velvet to transfer an imprint of bacteria corresponding to the colonies of the initial plate. This imprint is transferred in turn to fresh agar plates of various compositions, as needed. A more detailed account should appear shortly in Jour. Bacteriology, but I thought you might have present use for it.

Yours sincerely,

Joshua Lederberg,
Associate Professor of Genetics